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AUTHOR Zahner, Jane
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ABSTRACT

This paper describes the needs assessment activities that informed the design and development of M.Ed. and post-master's degree courses and programs to be delivered onsite and through distance technology support in rural areas. Two partner school systems participated in the needs assessment with three more currently involved in the programs. Participating school systems range in size from less than 1000 K-12 enrollment to just over 3000. The university partner in this project is Valdosta State University, a regional university in South Georgia. In the spring 2000, nearly 200 teachers and administrators enrolled in a needs assessment course offered by the Department of Curriculum and Instructional Technology. Some of these educators were already involved in systematic school improvement processes at their schools, and others were not. The students were in a unique situation of simultaneously studying needs assessment as an academic topic, conducting needs assessment as a part of their own school improvement process, and acting as subjects in a needs assessment conducted by the author. In fall 2000, participants began to earn graduate degrees in the School Improvement Degree Programs by taking innovative courses offered onsite at their rural school systems and through distance technologies. The programs, courses, and modules were designed based on the extensive school-based needs assessment conducted during the spring course. Partnerships among school personnel, teacher educators, and instructional designers have led to programs that are inclusive, team building, action-oriented, and flexible. Several other school systems in the region have asked for the projects to be phased in during the next two years. The needs assessment methods, procedures, and results are briefly described. Samples and excerpts from the needs assessment instruments from different phases are included to assist others who are doing similar work. (AEF)

NEEDS ASSESSMENT FOR DESIGN AND DELIVERY OF SITE-BASED TECHNOLOGY-SUPPORTED SCHOOL IMPROVEMENT DEGREE PROGRAMS

Jane Zahner
Valdosta State University

Introduction

With schools' increasing accountability for student achievement comes increasing pressure on teachers and administrators to know how to effect the needed changes. This paper describes the needs assessment activities that informed the design and development of M.Ed. and post-master's degree courses and programs to be delivered onsite and through distance technology support in rural areas. Two partner school systems participated in the needs assessment with three more currently involved in the programs. Participating school systems range in size from less than 1000 K-12 enrollment to just over 3000. The University partner in this project is Valdosta State University, a regional university in South Georgia with an enrollment just under 10,000. VSU has a large teacher education program, enrolling over 3000 undergraduate and graduate students and providing training for a significant percentage of the educators in the largely rural, economically limited 41 county area covering 1/3 of the geographic area of Georgia.

In spring 2000 nearly 200 teachers and administrators enrolled in a needs assessment course offered by the Department of Curriculum and Instructional Technology. Some of these educators were already involved in systematic school improvement processes at their schools, others were not. They enrolled in the course with the expectation that full site-based graduate programs were in the design and development phase and would incorporate the needs assessment course as a part of the eventual program of study. In essence, students began the program on a promise that the University would deliver the goods. What those goods would be was to be based upon the results of needs assessment activities taking place concurrently with the course. Thus, students were in a unique situation of simultaneously studying needs assessment as an academic topic, conducting needs assessment as a part of their own school improvement process and being involved as subjects in a needs assessment conducted by the author.

In fall 2000 the promise was fulfilled. Participants began to earn graduate degrees in the School Improvement Degree Programs by taking innovative courses offered onsite at their rural school systems and through distance technologies. They are enrolled in degree programs designed and developed to specifically improve their own schools and systems, while increasing their own professional knowledge and competence. The programs, courses and modules were designed based on the extensive school-based needs assessment conducted during the spring course. Partnerships among school personnel, teacher educators and instructional designers have led to programs that are inclusive, team building, action-oriented and flexible. Several other school systems in the region have asked for the programs to be phased in during the next two years.

Needs assessment methods

This paper briefly describes the needs assessment methods, procedures and results. Samples and excerpts from the needs assessment instruments are included in order to assist others who are doing similar work. While one direct outcome of the needs assessment was an initiation of a design and development competition for technology-delivered course modules, that process is described only briefly. For more information about the courses, modules and programs contact the author of this paper.

A systematic curricular and instructional needs assessment was conducted at two rural school systems during Spring Semester 2000. The purpose of the needs assessment was to gain guiding programmatic input from all stakeholders. This input was essential in order to identify the educational

courses and programs required to best meet the educational needs of the individuals enrolled in the program and to achieve the educational outcomes of the school systems involved. In addition, the needs assessment process, data and resulting report established the framework for the "charter" degree program proposal submitted to the University System of Georgia Board of Regents.

Phase One of the needs assessment was really a 'wants assessment' (see Phase one: Demographics and wants assessment). Participants (n=165) were first asked what professional development / coursework would be most useful to them personally. They were asked to include the title and content as well as recommendations for delivery method, instructor, and other participants. This survey also asked for name and contact information, number of years as a teacher, number of years in current position, subjects taught, grade levels taught and leadership roles, if any. The results of this survey were compiled, categorized and distributed to the participants. This served as a discussion topic for groups as they examined their personal needs/requests in the context of school improvement needs indicated by the school profiles they were building during the course. The results of this survey indicated a wide variety of professional development 'wants' with teaching/managing multiple ability levels, time management and technology most often mentioned.

Phase Two of the needs assessment consisted of a survey which asked teachers to identify the grade-appropriate knowledge/skills their students lacked at the beginning of the school year (see Phase two: Student readiness). Analysis of these data resulted in a narrative that described the observed skill deficiencies across P-12 educational levels. Reading and math skill deficiencies were observed spanning the entire curriculum. This narrative was shared with the participants and incorporated into their data gathering for the ongoing School Improvement process.

Participants in small within-school groups held peer-led discussions in Phase Three of the needs assessment (see Phase three: Professional development needs based on School Improvement Plan). Groups were asked to generate five content areas appropriate for School Improvement Degree programs with justification based on documented school improvement needs. They included a short description of the content, target audience and specified delivery options from a given list. Results of this survey generated the following broad categories of professional development/ coursework have been identified as needed to support school improvement goals.

School Improvement Areas of Need

- Curriculum Alignment
- Differentiated Instruction (grouping, at-risk, etc.)
- School-Business Partnerships
- Instructional Strategies (teaching strategies, direct instruction, specific programs, etc.)
- Analyzing Test Scores
- Alternative Assessment (portfolios, rubrics, etc.)
- Cultural Diversity
- Reading Strategies
- Writing Strategies
- Math Strategies and Curriculum
- Motivation
- Test Taking Strategies
- Parental Involvement
- Critical Thinking Skills
- Technology Literacy
- Reference Materials
- Legal Issues
- Team Management
- Interaction With Parents
- Time Management
- Classroom Management

Phase Four asked individuals to judge and report competence in 11 general computer skills and 9 computer skills dealing with Internet use (see Phase four: Computer skills/resources checklist). The Checklist also asked participants to report on the type and quality of computing resources available to them at school and at home as well as their learning preferences in regard to technological delivery of instruction. Findings from analysis of the data produced by this checklist indicated that some individuals would need extensive basic computer instruction in order to participate in instruction using significant technological delivery. However, findings also indicated an overall fairly high level of computer skills competence and a very high level of computer access including Internet access. Participants also indicated a great deal of interest in technological delivery of program instruction, with a concurrent need for peer and instructor contact as well.

In Phase Five of the needs assessment activity, focus groups and peer-led discussion groups involved all participants in multiple assessments. Participants were assigned to these focus groups and discussion groups based on the demographic information collected in Phase One. The needs assessment coordinator facilitated three consecutive focus groups (see Phase five: Needs assessment coordinator-led focus groups). The first group consisted of selected counseling, special education, social work, and speech language professionals to discuss the needs for content from their areas of expertise to be shared with the rest of the school. The second focus group brought together reading teachers to generate ideas for extending reading instruction across all courses/levels. A third focus group, composed of teachers at 'transition' grades from elementary to middle and middle to secondary, generated ideas for the improvement of communication between school levels. Three peer-led discussion groups were going on concurrently with the focus groups. The first (see Phase five: Peer discussion group A) guided participants to respond to expert-suggested 'best practices' within content areas, the second resulted in generation of ideas about professional development needs based on career level and years of service (see Phase five: Peer discussion group B), and the third required participants to create a rubric suitable for judging educational computer use and program ideas for moving teachers to higher levels of computer competency (see Phase Five: Peer discussion group C).

Needs assessment instruments

The following are examples of either entire needs assessment instruments or excerpts from them. In many cases the format of the instrument has been altered to save space in this paper. For more information concerning the administration of these instruments or the analysis of the data collected through their administration, please contact the author of this paper.

Phase one: Demographics and "wants assessment"

Recall: A need is a gap between what is and what ought to be. In order to design the School Improvement program and courses to meet your individual needs and the needs of your school, your input is essential. Tonight and during the next few weeks, I will be asking you to contribute information and ideas about what will make this program work for you.

I've been asked to design a needs assessment that includes all relevant stakeholders in this process. I'll be asking you to complete short surveys; I may ask that some of you participate in focus groups with me; I may request short telephone interviews with some of you. All the work you've been doing in collecting information for your school profile will be used, as will your work on the school mission and vision. I'll also consult with administrators, college faculty and school improvement professionals in other programs. I'll look at the professional literature to see what successful School Improvement degree programs include and how they are structured.

Anyone who would like to discuss this needs assessment or to contribute ideas for the program and courses is welcome to contact me directly at __ or e-mail __. Your contributions will be taken seriously and be held confidential.

Please complete the short survey below and turn it in to the VSU faculty for return to me. Before you turn it in, please tear this sheet on the dotted line. I'd like for you to have this needs assessment description to keep, as well as the record of my telephone number and e-mail address.

Name _____ e-mail _____

School _____ work phone _____

How many years have you been employed as a teacher? _____ How many years at this school? _____

Subject(s) currently taught _____

Grade level(s) currently
taught_____
Do you currently or recently act as a team leader, lead teacher or have other similar duties? Briefly explain.

(On reverse)
Imagine and describe a professional development course/activity designed just for you. Title? Content? Delivery (in class, hands-on, Internet, etc.)? Length? Instructor (generally, who)? Other participants (generally, who?) What need would it serve?

Phase two: Student readiness

Grade level: _____ (If system or multiple grade levels, please indicate)
In a previous survey, some of you indicated that you are faced with challenges in teaching students of multiple abilities in your classes. This survey is intended to ask your observation of areas for which your students may need more and/or different instructional preparation. (If you don't teach self-contained classes, choose any observed student performance). Write about at least three examples of performance discrepancies and give as much detail as possible.

What grade-level-appropriate knowledge/skills did your students lack at the beginning of this school year? Description of content? Description of student performance?

Phase three: Professional development needs based on School Improvement Plan

This survey should be done in groups of 10-15 with a facilitator leading, organizing, summarizing & recording. Each group should hand in one document that reflects their collaborative work.

- Generate five content areas for coursework appropriate for the School Improvement Degree programs, both M.Ed. and Ed.S. Be sure that you could justify the content based on documented school improvement needs.
- Include a short description of the target audience for this coursework, if not appropriate for all participants.
- Check the delivery method or combination of methods you think would be most effective for the content.
  ___3 hr. course offered over entire semester
  ___3 hr. course offered in 1/2 semester
  ___Multiple-session workshop
  ___Single-session workshop
  ___Self-paced module
  ___Peer-Supported study group
  ___Other

Phase four: Computer skills / resources checklist

The School Improvement Degree Programs Needs Assessment is being conducted to investigate course and module delivery possibilities as well as content needs. There are many ways instructional technology could assist program delivery including use of the WWW, CD-ROMs, video, e-mail and on-site hands-on lab courses. This checklist is to gain information about your current computer skills and the computing resources you have readily available to you. NOTE: No decisions have been made to use technology in delivery; this is exploratory only.

Here is a list of general computer skills that would be useful for success in technology-integrated instruction. Read each item and indicate the response which best describes your current ability.

I can:

- Start up, reboot, and shut down a computer Yes No
- Start and quit a program stored on the hard drive Yes No

• Save and retrieve files to and from a floppy or the hard drive	Yes	No
• Cut/copy text from one source and paste it onto another	Yes	No
• Open and close menus and windows	Yes	No
• Move and resize windows on your desktop	Yes	No
• Navigate a directory structure to find files	Yes	No
• Type at least 40 words a minute	Yes	No
• Create a word processing document	Yes	No
• Print a word processing document	Yes	No
• Use spell and grammar checking to revise my work	Yes	No
• Log onto the Internet	Yes	No
• Retrieve and delete e-mail messages	Yes	No
• Create, send, forward and reply to e-mail messages	Yes	No
• Distinguish between an e-mail address and a web address	Yes	No
• Send group mailings	Yes	No
• Post messages to discussion lists	Yes	No
• Locate and access information using a WWW search engine	Yes	No
• Check the credibility of Internet resources	Yes	No
• Locate and use appropriate computer resources and technologies within a library or media center	Yes	No

This section asks about the computer resources that are available to you at home and at school.

21. Which of the following describes your home computer? (Check as many as apply)

___Do not have home computer
___Computer has modem
___Computer has CD ROM Drive
___Computer has sound card & speakers
___Computer has printer
___Phone line available to computer
___Connected to Internet Service Provider
___E-mail account

22. Which of the following describes your classroom computer? (Check as many as apply)

___Do not have classroom computer
___Computer has modem
___Computer has CD ROM Drive
___Computer has sound card & speakers
___Computer has printer
___Phone line/network line available to computer
___Connected to Internet Service Provider
___E-mail account

This section asks about your instructional preferences in the area of course or module delivery via computer technologies.

23. When I am asked to use software or technologies that I haven't used before (such as e-mail, VCR):
    a. I look forward to learning new skills.
    b. I feel apprehensive, but try anyway.
    c. I put it off or try to avoid it.

24. If I had to describe my predominant learning style/preference, I would say it is:
    a. Auditory - I learn best when I can listen to an explanation of a concept.
    b. Visual - I learn best when I can read the course materials or view graphics and other visuals.
    c. Tactile - I learn best by "doing".

25. Having face-to-face interaction with my instructors and peers is:
    a. not particularly important to me.
    b. somewhat important to me.
    c. very important to me.

What are your ideas about how technology could be useful in delivery of the School Improvement Degree Programs? What are your concerns?

Phase five: Needs assessment coordinator-led focus groups

In this activity, held simultaneously with other Phase 5 activities, participants were grouped as described below. The needs assessment coordinator acted as leader and recorder within a 40 minute time period. The following questions provided the framework for the focus groups.

Focus Group: "Support for You"
Participants: 8-10 selected counseling, special ed, social workers, speech/language, etc. across schools and levels. Groups are homogenous by support function.

General Questions:
1. In what content from your area do other school personnel need training?
2. Who needs training?
3. At what level(s)?
4. How can your needs be addressed in a school improvement program?
    - Professional development needs?
    - Restructuring of time, resources
    - New curriculum materials?

Focus Group: "Reading for All"
Participants: 8-10 selected reading teachers or personnel in reading support areas (media specialists) across schools and levels. Groups are homogenous by function.

General Questions:
1. In what content from your area do other school personnel need training?
2. At what level(s)?
3. Who?
4. How can your needs be addressed in a school improvement program?
    - Professional development needs?
    - Restructuring of time, resources
    - New curriculum materials?

Focus Group: "Transitions"
Participants: 8-10 selected teachers from $5^{th}/6^{th}$ grades or $8^{th}/9^{th}$ grades. Groups are homogenous by teaching assignment in a grade which transitions from elementary school to middle school or middle school to high school.

General Questions:
1. How can your needs be addressed in a school improvement program?
    - Professional development needs?
    - Restructuring of time, resources
    - New curriculum materials?
2. How can communication be improved between teachers at different schools?

Phase five: Peer-led discussion group activity A

In this activity, held simultaneously with other Phase 5 activities, participants were grouped (maximum of five persons per group) by content interest and grade level responsibilities. Each group was given a list of 'promising practices' in teaching and learning in their areas earlier identified by experts (teacher educators and arts and sciences content faculty). They were asked to select a leader and a recorder, conduct a discussion and construct written evidence of the results of their discussion within a 40-minute time period. The following questions provided the framework for their discussions.

Needs Assessment Summary: Promising Educational Practices

- What methods/ideas were most familiar to your group members? Give examples of ways group members have used familiar methods/ideas.
- What methods/ideas were least familiar to your group members?
- Which methods/ideas are applicable across educational levels (s)? Which are not, and why?
- How did you rank the attached methods/ideas according to group interest in further study?

Phase five: Peer-led discussion group activity B

In this activity, held simultaneously with other Phase 5 activities, participants were grouped (maximum of five persons per group) by years of experience in teaching. They were asked to select a leader and a recorder, conduct a discussion and construct written evidence of the results of their discussion within a 40-minute time period. The following questions provided the framework for their discussions.

Newcomer, Mid-Career and Seasoned Veteran?

- What are some of the professional development activities by group members in the last 2 years?
- What did the group decide were the top three activities and why?
- How might the professional development needs of your career-level category differ from those of other teachers?
- How might the professional development focus of your school/system need to change to facilitate school improvement?

Phase five: Peer-led discussion group activity C

In this activity, held simultaneously with other Phase 5 activities, participants were grouped (maximum of five persons per group) by convenience. Each group was given the following activity to complete. They were asked to select a leader and a recorder, conduct a discussion and construct written evidence of the results of their discussion within a 40-minute time period.

Build a rubric

A rubric is a way of describing what performance 'looks like' at various levels of achievement. For example, the following might be a rubric to evaluate the "Performance of Automobile Drivers".

Level 1: Novice	Level 2: Home Town	Level 3: Standard	Level 4: Expert
Has driven a few times accompanied by an instructor. Must be reminded to signal, maintain steady speed, park correctly and yield to traffic. Is worried and uncomfortable about having to drive.	Drives occasionally in familiar locations. Often fails to signal, maintain steady speed, park correctly or yield to traffic. Is uncomfortable driving at night, in rain or fog, or in moderate traffic.	Drives regularly and competently in generally familiar locations both day and night. Seldom fails to signal, maintain steady speed, park correctly or yield to traffic. Is uncomfortable driving in adverse conditions including unfamiliar locales, inclement weather and heavy traffic.	Drives daily with confidence and expertise. Always signals, maintains steady speed, parks correctly and yields to traffic. Can easily adapt to driving in adverse conditions including darkness, unfamiliar locale, inclement weather and heavy traffic.

Your Task

What you are to do, as a group, is to build a similar rubric to describe levels of expertise in using computers, either in the classroom or for your own personal productivity at school or at home. You may want to discuss computer use as a whole or, even better, choose a more specific topic like Internet use, word-processing, curriculum/technology integration, database use, etc. Once the rubric is built you will use it to look at your own skill levels and generate ideas for professional development.

- Choose your topic.

- Decide on and name your levels of performance.
- Discuss what a teacher 'looks like' at various levels of performance.
- Write the description of the teacher performance at the various levels.
- Discuss where each of you 'fits' within the rubric.
- Mark an "X" on the rubric for the current level of performance for each group member (no names).
- Generate ideas for what kind(s) of courses/modules offered through the School Improvement Degree Programs would be needed to move teachers to higher levels of competency on your rubric.
- Generate ideas for what kind(s) of resources (hardware, software, facilities) would be needed to move teachers to higher levels of competency on your rubric.

Groups build rubric on supplied form and answer the following open-ended questions.

- What kind(s) of courses/modules offered through the School Improvement Degree Programs would be needed to move teachers to higher levels of competency on your rubric?
- What kind(s) of resources (hardware, software, facilities) would be needed to move teachers to higher levels of competency on your rubric?

Summary

Program and course development for the School Improvement Programs proceeded based on the results of the needs assessment. It was decided that the courses had to be flexible in order to address the documented school improvement needs of the teachers, administrators, resource personnel within the schools and school systems involved. To meet this need for flexibility some courses in the School Improvement Degree Programs were constructed from or include modules of varying lengths. Each program participant selects modules based on relevancy to his/her teaching and the needs of grade level or content teams or groups. In order to assure consistency and quality, modules were developed according to a template. Instructors were encouraged to adapt existing modules on the same topic building knowledge and skills from module to module. Faculty developing modules were given guidance in developing modules within the template, earned a stipend, and were supported in assembling the modules for duplication, storage and delivery. Designer/developers of modules were required to teach the module the first time through and revise based on formative evaluation data. They may or may not be assigned to teach the module at later points in the school improvement program.

The combination of extensive involvement of teachers and administrators in the design of their professional development within the framework of student achievement has powerful potential. Each year school systems in Georgia write consolidated grant applications that are based on and aligned with their school improvement plans and progress indicators. The integration of this process with the School Improvement Degree Programs has broadened participation in the process of gathering and analyzing student achievement data and has increased interest and individual responsibility for the results.

While the results are not in as to whether these School Improvement Degree Programs will have an impact on the bottom line of student achievement at least the right people are now looking for that impact -- the teachers and administrators themselves in partnership with the University.

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